

## ABSTRACT

The present invention relates to protein chips useful for the large-scale study of protein function where the chip contains densely packed reaction wells. The invention also 5 relates to methods of using protein chips to assay simultaneously the presence, amount, and/or function of proteins present in a protein sample or on one protein chip, or to assay the presence, relative specificity, and binding affinity of each probe in a mixture of probes for each of the proteins on the chip. The invention also relates to methods of using the protein chips for high density and small volume chemical reactions. Also, the invention 10 relates to polymers useful as protein chip substrates and methods of making protein chips. The invention further relates to compounds useful for the derivatization of protein chip substrates.

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